

according to Regulation (EC) No. 1907/2006 as amended by (EC) No. 1272/2008

Section 1. Identification of the Substance/Mixture and of the Company/Undertaking

- 1.1 Product Code:** 9000215
Product Name: 5(Z),8(Z),11(Z)-Eicosatrienoic Acid methyl ester
Synonyms: 5Z,8Z,11Z-eicosatrienoic acid, methyl ester; Mead Acid methyl ester;
- 1.2 Relevant identified uses of the substance or mixture and uses advised against:**
Relevant identified uses: For research use only, not for human or veterinary use.
- 1.3 Details of the Supplier of the Safety Data Sheet:**
- Company Name:** Cayman Chemical Company
1180 E. Ellsworth Rd.
Ann Arbor, MI 48108
- Web site address:** www.caymanchem.com
- Information:** Cayman Chemical Company +1 (734)971-3335
- 1.4 Emergency telephone number:**
- Emergency Contact:** CHEMTREC Within USA and Canada: +1 (800)424-9300
CHEMTREC Outside USA and Canada: +1 (703)527-3887

Section 2. Hazards Identification

- 2.1 Classification of the Substance or Mixture:**
- 2.1.1 Classification according to Regulation (EC) No 1272/2008 [CLP]:**
- Flammable Liquids, Category 2
Skin Corrosion/Irritation, Category 2
Toxic To Reproduction, Category 2
Specific Target Organ Toxicity (single exposure), Category 3
Specific Target Organ Toxicity (repeated exposure), Category 2
Aspiration Toxicity, Category 1
Aquatic Toxicity (Chronic), Category 2

2.2 Label Elements:

- 2.2.1 Labeling according to Regulation (EC) No 1272/2008 [CLP]:**



GHS Signal Word: **Danger**

GHS Hazard Phrases:

- H225: Highly flammable liquid and vapor.
H315: Causes skin irritation.
H361: Suspected of damaging fertility or the unborn child.
H336: May cause drowsiness or dizziness.
H373: May cause damage to organs through prolonged or repeated exposure.
H304: May be fatal if swallowed and enters airways.
H411: Toxic to aquatic life with long lasting effects.

GHS Precaution Phrases:

P210: Keep away from {heat/sparks/open flames/hot surfaces}. - No smoking.
P280: Wear {protective gloves/protective clothing/eye protection/face protection}.
P264: Wash {hands} thoroughly after handling.
P362+364: Take off contaminated clothing and wash it before reuse.
P201: Obtain special instructions before use.
P202: Do not handle until all safety precautions have been read and understood.
P281: Use personal protective equipment as required.
P261: Avoid breathing {dust/fume/gas/mist/vapours/spray}.
P260: Do not breathe {dust/fume/gas/mist/vapours/spray}.
P273: Avoid release to the environment.

GHS Response Phrases:

P303+361+353: IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower.
P302+352: IF ON SKIN: Wash with plenty of soap and water.
P332+313: If skin irritation occurs, get medical advice/attention.
P308+313: IF exposed or concerned: Get medical attention/advice.
P304+340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P312: Call a {POISON CENTER/doctor/...} if you feel unwell.
P314: Get medical attention/advice if you feel unwell.
P301+310: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P331: Do NOT induce vomiting.
P391: Collect spillage.

GHS Storage and Disposal Phrases:

Please refer to Section 7 for Storage and Section 13 for Disposal information.

- 2.3 Adverse Human Health** Aspiration hazard if swallowed-may be fatal if enters lungs, will cause damage.
- Effects and Symptoms:** Causes skin irritation.
Material may be irritating to the mucous membranes and upper respiratory tract.
May be fatal if swallowed and enters airways.
May be harmful by inhalation, ingestion, or skin absorption.
May cause drowsiness or dizziness.
May cause damage to organs through prolonged or repeated exposure.
May cause eye or respiratory system irritation.
Suspected of damaging fertility or the unborn child.
Toxic to aquatic life with long lasting effects.
To the best of our knowledge, the toxicological properties have not been thoroughly investigated.

Section 3. Composition/Information on Ingredients

CAS # / RTECS #	Hazardous Components (Chemical Name)/ REACH Registration No.	Concentration	EC No./ EC Index No.	GHS Classification
14602-39-2 NA	5(Z),8(Z),11(Z)-Eicosatrienoic Acid methyl ester	0.5 %	NA NA	No data available.
110-54-3 MN9275000	n-Hexane	99.5 %	203-777-6 601-037-00-0	Flam. Liq. 2: H225 Asp. Toxic. 1: H304 Skin Corr. 2: H315 STOT (SE) 3: H335 H336 Toxic Repro. 2: H361 STOT (RE) 2: H373 Aquatic (C) 2: H411

Section 4. First Aid Measures

- 4.1 Description of First Aid Measures:** No data available.
- In Case of Inhalation:** Remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Get immediate medical attention.
- In Case of Skin Contact:** Immediately wash skin with soap and plenty of water for at least 15 minutes. Remove contaminated clothing. Get medical attention if symptoms occur. Wash clothing before reuse.
- In Case of Eye Contact:** Hold eyelids apart and flush eyes with plenty of water for at least 15 minutes. Have eyes examined and tested by medical personnel.
- In Case of Ingestion:** Wash out mouth with water provided person is conscious. Never give anything by mouth to an unconscious person. Get medical attention. Do NOT induce vomiting unless directed to do so by medical personnel.
- 4.2 Important Symptoms and Effects, Both Acute and Delayed:** Eye contact may cause: redness, blurred vision, or tearing. Ingestion may cause: chemical pneumonitis, chest pain, CNS depression, dizziness, drowsiness, gastrointestinal discomfort, giddiness, headache, lung irritation, muscle weakness, nausea, numb extremities, pulmonary edema, slowed reaction time, slurred speech, and unconsciousness. Prolonged or repeated skin contact may cause dermatitis, dryness, or cracking. Vapors may cause drowsiness and dizziness.

Section 5. Fire Fighting Measures

- 5.1 Suitable Extinguishing Media:** Use alcohol-resistant foam, carbon dioxide, water, or dry chemical spray. Use water spray to cool fire-exposed containers.
- Unsuitable Extinguishing Media:** A solid water stream may be inefficient.
- 5.2 Flammable Properties and Hazards:** Can release vapors that form explosive mixtures at temperatures at or above the flash point. Container explosion may occur under fire conditions. Emits toxic fumes under fire conditions. Sensitive to static discharge. Vapors can travel to a source of ignition and flash back.
- Flash Pt:** -21.70 C
- Explosive Limits:** LEL: 1.1% at 25.0 C UEL: 7.5% at 25.0 C
- Autoignition Pt:** 225.00 C
- 5.3 Fire Fighting Instructions:** As in any fire, wear self-contained breathing apparatus pressure-demand (NIOSH approved or equivalent), and full protective gear to prevent contact with skin and eyes. Note: Flammable as diluted in n-hexane.

Section 6. Accidental Release Measures

- 6.1 Protective Precautions, Protective Equipment and Emergency Procedures:** Avoid breathing vapors and provide adequate ventilation. As conditions warrant, wear a NIOSH approved self-contained breathing apparatus, or respirator, and appropriate personal protection (rubber boots, safety goggles, and heavy rubber gloves).
- 6.2 Environmental Precautions:** Take steps to avoid release into the environment, if safe to do so.
- 6.3 Methods and Material For Containment and Cleaning Up:** Contain spill and collect, as appropriate. Transfer to a chemical waste container for disposal in accordance with local regulations.

Section 7. Handling and Storage

- 7.1 Precautions To Be Taken in Handling:** Avoid breathing dust/fume/gas/mist/vapours/spray.
 Avoid prolonged or repeated exposure.
 Keep away from sources of ignition.
 Take precautionary measures against static discharge.
- 7.2 Precautions To Be Taken in Storing:** Keep away from heat, sparks and flame.
 Keep container tightly closed.
 Store in accordance with information listed on the product insert.

Section 8. Exposure Controls/Personal Protection

8.1 Exposure Parameters:

CAS #	Partial Chemical Name	Britain EH40	France VL	Europe
14602-39-2	5(Z),8(Z),11(Z)-Eicosatrienoic Acid methyl ester	No data.	No data.	No data.
110-54-3	n-Hexane	TWA: 72 mg/m3 (20 ppm) STEL: ()	TWA: 72 mg/m3 (20 ppm)	TWA: 72 mg/m3
CAS #	Partial Chemical Name	OSHA TWA	ACGIH TWA	Other Limits
14602-39-2	5(Z),8(Z),11(Z)-Eicosatrienoic Acid methyl ester	No data.	No data.	No data.
110-54-3	n-Hexane	PEL: 500 ppm	TLV: 50 ppm	No data.

8.2 Exposure Controls:

- 8.2.1 Engineering Controls (Ventilation etc.):** Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.
- 8.2.2 Personal protection equipment:**
- Eye Protection:** Safety glasses
- Protective Gloves:** Compatible chemical-resistant gloves
- Other Protective Clothing:** Lab coat
- Respiratory Equipment (Specify Type):** NIOSH approved respirator, as conditions warrant.
- Work/Hygienic/Maintenance Practices:** Do not take internally.
 Facilities storing or utilizing this material should be equipped with an eyewash and a safety shower.
 Wash thoroughly after handling.
 No data available.

Section 9. Physical and Chemical Properties

9.1 Information on Basic Physical and Chemical Properties

Physical States: Gas Liquid Solid
Appearance and Odor: A solution in hexane
Melting Point: No data.
Boiling Point: No data.
Flash Pt: -21.70 C
Evaporation Rate: No data.
Explosive Limits: LEL: 1.1% at 25.0 C UEL: 7.5% at 25.0 C
Vapor Pressure (vs. Air or mm Hg): 124 MM_HG at 20.0 C
Vapor Density (vs. Air = 1): No data.
Specific Gravity (Water = 1): No data.
Solubility in Water: No data.
Autoignition Pt: 225.00 C

9.2 Other Information

Percent Volatile: No data.
Molecular Formula & Weight: C₂₁H₃₆O₂ 320.5

Section 10. Stability and Reactivity

10.1 Reactivity: No data available.
10.2 Stability: Unstable Stable
10.3 Stability Note(s): Stable if stored in accordance with information listed on the product insert.
Polymerization: Will occur Will not occur
10.4 Conditions To Avoid: heat, flames and sparks
10.5 Incompatibility - Materials To Avoid: oxidizing agents
10.6 Hazardous Decomposition Or Byproducts: carbon dioxide
 carbon monoxide

Section 11. Toxicological Information

11.1 Information on Toxicological Effects: The toxicological effects of this product have not been thoroughly studied.
 Hexane - Toxicity Data: Oral LD50 (rat): 15,840 mg/kg; Inhalation TCLO (human): 5,400 mg/m³ (10m); Inhalation LC50 (rat): 48,000 ppm (4h);
 Hexane - Irritation Data: Eyes (rabbit): 10 mg mild;
Chronic Toxicological Effects: Hexane - Investigated as a mutagen and reproductive effector.
 Only select Registry of Toxic Effects of Chemical Substances (RTECS) data is presented here.
 See actual entry in RTECS for complete information.
 Hexane RTECS Number: MN9275000
Carcinogenicity: NTP? No IARC Monographs? No OSHA Regulated? No

CAS #	Hazardous Components (Chemical Name)	NTP	IARC	ACGIH	OSHA
14602-39-2	5(Z),8(Z),11(Z)-Eicosatrienoic Acid methyl ester	n.a.	n.a.	n.a.	n.a.
110-54-3	n-Hexane	n.a.	n.a.	n.a.	n.a.

Section 12. Ecological Information

- 12.1 Toxicity:** Avoid release into the environment.
 Runoff from fire control or dilution water may cause pollution.
- 12.2 Persistence and Degradability:** No data available.
- 12.3 Bioaccumulative Potential:** No data available.
- 12.4 Mobility in Soil:** No data available.
- 12.5 Results of PBT and vPvB assessment:** No data available.
- 12.6 Other adverse effects:** No data available.

Section 13. Disposal Considerations

- 13.1 Waste Disposal Method:** Dispose in accordance with local, state, and federal regulations.

Section 14. Transport Information

14.1 LAND TRANSPORT (US DOT):

DOT Proper Shipping Name: Hexanes Solution
DOT Hazard Class: 3 FLAMMABLE LIQUID
UN/NA Number: 1208 **Packing Group:** II



14.1 LAND TRANSPORT (European ADR/RID):

ADR/RID Shipping Name: Hexanes Solution
UN Number: 1208 **Packing Group:** II
Hazard Class: 3 - FLAMMABLE LIQUID

14.3 AIR TRANSPORT (ICAO/IATA):

ICAO/IATA Shipping Name: Hexanes Solution
UN Number: 1208 **Packing Group:** II
Hazard Class: 3 - FLAMMABLE LIQUID **IATA Classification:** 3

Additional Transport Information: Transport in accordance with local, state, and federal regulations.
 When sold in quantities of less than or equal to 1 mL, or 1 g, with an Excepted Quantity Code of E1, E2, E4, or E5, this item meets the De Minimis Quantities exemption, per IATA 2.6.10.
 Therefore packaging does not have to be labeled as Dangerous Goods/Excepted Quantity.

Section 15. Regulatory Information

EPA SARA (Superfund Amendments and Reauthorization Act of 1986) Lists

CAS #	Hazardous Components (Chemical Name)	S. 302 (EHS)	S. 304 RQ	S. 313 (TRI)
14602-39-2	5(Z),8(Z),11(Z)-Eicosatrienoic Acid methyl ester	No	No	No
110-54-3	n-Hexane	No	Yes 5000 LB	Yes

CAS #	Hazardous Components (Chemical Name)	Other US EPA or State Lists
14602-39-2	5(Z),8(Z),11(Z)-Eicosatrienoic Acid methyl ester	CAA HAP,ODC: No; CWA NPDES: No; TSCA: No; CA PROP.65: No



SAFETY DATA SHEET

5(Z),8(Z),11(Z)-Eicosatrienoic Acid methyl ester

110-54-3	n-Hexane	CAA HAP,ODC: HAP; CWA NPDES: No; TSCA: Yes - Inventory; CA PROP.65: No
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Regulatory Information Statement: This SDS was prepared in accordance with 29 CFR 1910.1200 and Regulation (EC) No.1272/2008.

Section 16. Other Information

Revision Date: 04/15/2015

Additional Information About This Product: No data available.

This Product:

Company Policy or Disclaimer: DISCLAIMER: This information is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes.